



**Thermo Scientific  
Central Water Purification Systems**

**customized solutions**

for large pure water volume requirements

**Thermo**  
SCIENTIFIC

# Designed for Reliability and Efficiency in One System

**As water is the universal solvent, and used in nearly all laboratory applications,** it must be free of impurities to help ensure consistent results. Thermo Scientific™ central water systems are designed to produce reliable pure water meeting ISO 285, ASTM Type 2, Clinical Laboratory Reagent Water (CLRW) and European Pharmacopeia standards.

Central systems can replace numerous individual systems, while reducing costs by eliminating the need for ion exchanger regeneration. They meet daily volume requirements from 300 to > 100,000 L/day and support a number of applications, including feeding:

Autoclaves,  
washing machines,  
and sterilizers

Steam boilers and  
cooling towers

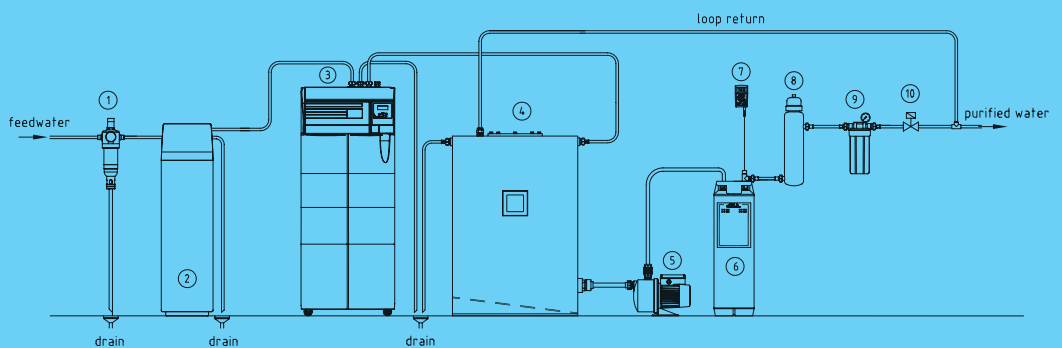
Automatic  
analyzers

Ultrapure water  
systems

## Create the ideal solution

Planning a pure water solution for a new or existing laboratory can be complex. From pre-design planning to proper equipment placement, our team of experts can help you make critical decisions required at every stage of the project.

## Schematic drawing of a central pure water purification system



### LEGEND

- |                                  |  |
|----------------------------------|--|
| 1   Pretreatment                 | 6   Pure water recirculation cartridge |
| 2   Softener                     | 7   Conductivity meter                 |
| 3   Pure water production system | 8   UV disinfection                    |
| 4   Storage reservoir            | 9   Sterile filter with housing 10"    |
| 5   Pure water distribution pump | 10   Loop return valve and timer       |

**Thermo Scientific central systems include tap water pretreatment, ready-to-connect units, and various storage and distribution solutions. Benefit from a number of features:**

- Built-in, economical water purification technologies include water softening, particle filtration, dechlorination, reverse osmosis, deionization, electrodeionization, ultrafiltration, UV disinfection and sterile filtration
- Pure water storage tanks from 100 L to > 5,000 L equipped with a sterile vent filter, sterile overflow, level control and the necessary connections to the distribution pump and distribution piping
- Additional accessories such as UV reactors, dosing systems, distribution pumps, heat exchangers and other options are available to help ensure reliable and consistent pure water quality
- Advanced electronic options control the purification process and monitor water quality, including quality alarm settings, alarm recognitions, historical operating data logging, remote monitoring options and programmable logic controllers (PLCs)
- Modular construction allows for easy upgrades to evolve with future needs



Customized Thermo Scientific central RO EDI pure water solution. All systems are manufactured in an ISO 9001/14001 TÜV certified facility.

## Trusted service when you need it

In addition to planning and installation, a complete portfolio of customized, integrated and innovative services and support solutions are available to help maintain equipment, improve productivity, reduce total cost of ownership and ensure compliance. Contact your Unity Lab Services representative or your authorized dealer for more information.

MEETS DAILY VOLUME REQUIREMENTS FROM

300 to > 100,000 L/DAY

# Thermo Scientific Reverse Osmosis Solutions

## from 40 to 1200 L/h

Ready-to-connect reverse osmosis systems for the demineralization of softened or hardness-stabilized tap water meet pure water volume requirements up to > 25,000 L/day. Modular construction allows for easy upgrades to evolve with your future needs.

ALSO FEATURING:

- Microprocessor control with digital conductivity measurement of feed water and permeate
- Individual limiting value monitoring of the permeate quality
- Display of operating and fault messages
- Automatic quality rinse, potential-free contact and RS-232 connector for printer output



### Reverse Osmosis Economic

System assembled on a polypropylene (PP) plastic plate for wall-mounting. Complete with activated carbon/pre-filter and hardness stabilizer. Reverse osmosis production rates from 40 to 120 L/h at 10°C.

### Reverse Osmosis DS, wall mounted

Compact, low noise and dust-proof cabinet construction. Locking door with window provides security and ease of visibility. Reverse osmosis production rates from 40 to 120 L/hr at 10°C.

### Reverse Osmosis Combi

System designed for all treatment steps: pretreatment, softening unit, reverse osmosis, storage tank with level control and pressure booster pump. Compact, low noise and dust-proof cabinet construction which has a lockable observation door. Reverse osmosis production rates from 40 to 120 L/h at 10°C.

# REVERSE OSMOSIS



### Reverse Osmosis DWI, wall mounted

Reverse osmosis system on a framework coated with synthetic-resin varnish. Complete unit, including 10" pretreatment filter housing, volume flow meter for permeate/concentrate. Reverse osmosis production rates from 100 to 350 L/h at 10°C.



### Reverse Osmosis DS, cabinet

Reverse osmosis cabinet system with digital control. Compact, low noise and dust-proof cabinet construction. Locking door with window provides security and ease of visibility. Reverse osmosis production rates from 300 to 1000 L/h at 10°C.



### Reverse Osmosis DSR Industrial Solutions

For production rates > 2000 L/h. Compact, stainless steel tubular frame construction. Reverse osmosis consisting of a high pressure pump (also a precompressor where necessary), reverse osmosis modules, complete pressure regulation unit, digital or analogue volume flow meter, solenoid valves and pressure gauge. Displays are integrated in the front of the switchgear cabinet, showing operating and fault messages. All versions are also available with double-stage reverse osmosis and PLC control.

# SPECIFICATIONS

<b>Reverse Osmosis Economic</b>	<b>40</b>	<b>60</b>	<b>120</b>
Permeate performance at 10 °C (L/h)	40	60	120
Connected load (kW)	0.30	0.30	0.30
Supply voltage (V/Hz)	230/50	230/50	230/50
Dimensions H x W x D (mm)	750 x 850 x 360	750 x 850 x 360	750 x 850 x 360
Weight (kg)	23	25	30
Cat. No.	05.3040 -ECO	05.3060 -ECO	05.3120 -ECO

<b>Reverse Osmosis DS, wall mounted</b>	<b>40</b>	<b>60</b>	<b>120</b>
Permeate performance at 10 °C (L/h)	40	60	120
Connected load (kW)	0.30	0.30	0.30
Supply voltage (V/Hz)	230/50	230/50	230/50
Dimensions H x W x D (mm)	800 x 600 x 400	800 x 600 x 400	800 x 600 x 400
Weight (kg)	50	52	55
Cat. No.	05.3040-DS	05.3060-DS	05.3120-DS

<b>Reverse Osmosis Combi</b>	<b>40</b>	<b>60</b>	<b>120</b>
Permeate performance at 10 °C (L/h)	40	60	120
Connected load (kW)	1.30	1.30	1.30
Supply voltage (V/Hz)	230/50	230/50	230/50
Dimensions H x W x D (mm)	1800 x 800 x 600	1800 x 800 x 600	1800 x 800 x 600
Weight (kg)	200	210	230
Cat. No.	05.3040-COM	05.3060-COM	05.3120-COM

<b>Reverse Osmosis DWI, wall mounted</b>	<b>100</b>	<b>180</b>	<b>300</b>	<b>350</b>
Permeate performance at 10 °C (L/h)	100	180	300	350
Connected load (kW)	0.60	0.60	0.60	0.60
Supply voltage (V/Hz)	230/50	230/50	230/50	230/50
Dimensions H x W x D (mm)	1300 x 600 x 430	1300 x 600 x 430	1300 x 600 x 430	1300 x 600 x 430
Weight (kg)	70	75	90	100
Cat. No.	05.3100-DWI	05.3180-DWI	05.3300-DWI	05.3350-DWI

<b>Reverse Osmosis DS, cabinet</b>	<b>300</b>	<b>600</b>	<b>900</b>	<b>1100</b>
Permeate performance at 10 °C (L/h)	300	600	900	1100
Connected load (kW)	1.60	1.60	1.60	1.60
Supply voltage (V/Hz)	450/50	450/50	450/50	450/50
Dimensions H x W x D (mm)	1800 x 800 x 600	1800 x 800 x 600	1800 x 800 x 600	1800 x 800 x 600
Weight (kg)	220	260	280	300
Cat. No.	05.3300-DS	05.3600-DS	05.3900-DS	05.31100-DS

<b>Reverse Osmosis DSR</b>	<b>2000</b>	<b>3000</b>	<b>5000</b>	<b>10000</b>	<b>12000</b>
Permeate performance at 10 °C (L/h)	2000	3000	5000	10000	12000
Connected load (kW)	4.4	5	5.5-7	13-15	15-18
Dimensions H x W x D (mm)	1800 x 2400 x 800	1800 x 3400 x 800	1800 x 3400 x 800	1800 x 4600 x 900	1800 x 4600 x 900
Supply voltage (V/Hz)	450/50	450/50	450/50	450/50	450/50
Weight (kg)	220		260	280	300
Cat. No.	AVAILABLE UPON REQUEST				

All systems include potential-free contact and RS 232 connector as printer output. Operating pressure max 14 bar.

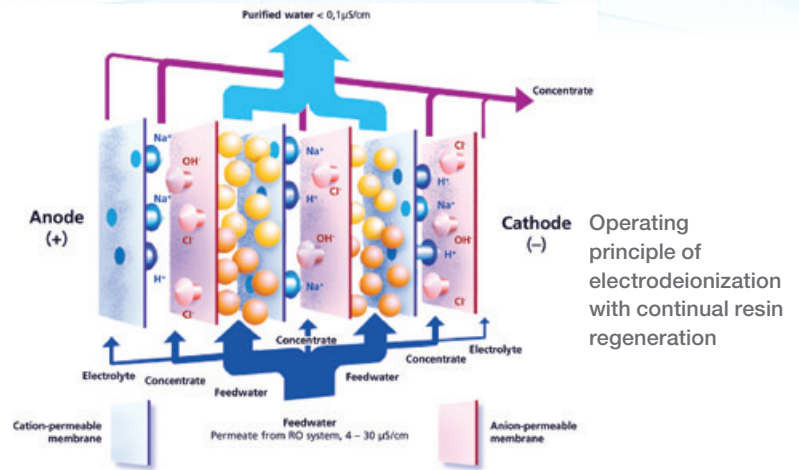


# Thermo Scientific Type 2 Water Solutions

from 80 to >1200 L/h

The quality of the high purity water supplied by reverse osmosis is not sufficient when conductivity below  $1 \mu\text{S}/\text{cm}$  is required. For such cases, we offer combinations of reverse osmosis with downstream electrodeionization (EDI).

This combination along with EDI technology is designed to allow product water of less than  $0.1 \mu\text{S}/\text{cm}$  to be obtained from  $600 \mu\text{S}/\text{cm}$  raw water. In addition, the continual self-regeneration of the high purity EDI mixed bed resins affects a high microbiological purity of the product water at low operating costs.



## MaxiTower and MaxiTower Plus Systems

Produce water that is less than  $0.1 \mu\text{S}/\text{cm}$ . Thermo Scientific™ MaxiTower™ and MaxiTower Plus reverse osmosis water purification systems have integrated EDI technology and a recirculation module in a dust-proof cabinet. These compact systems contain an additional polisher cartridge enabling direct connection to a recirculation loop. Complete units include a 10" pretreatment filter and volume flow meter for the RO permeate/concentrate. Microprocessor control has digital conductivity measurement of feedwater and permeate, as well as individual limiting value monitoring of the permeate. The systems also display operating and fault messages, have an automatic quality rinse, potential-free contact and RS-232 connector for printer output.



## Reverse Osmosis EDI System

Reverse Osmosis EDI systems (RO – EDI) are designed to run up to 24 hours a day. The production rate ranges from 200 to >2000 L/h. Compact with a stainless-steel frame that holds all easily accessible components, the Thermo Scientific™ Reverse Osmosis EDI system features a microprocessor control for fully automatic control and monitoring, limiting value setting and quality rinse.

# EDI SYSTEMS

# SPECIFICATIONS

<b>MaxiTower/MaxiTower Plus</b>	<b>80</b>	<b>150</b>	<b>230</b>	<b>300</b>
Pure water performance at 10 °C (L/h)	80	150	230	300
Pure water quality (µS/cm)	0.1–1.0	0.1–1.0	0.1–1.0	0.1–1.0
Operating pressure (max. bar)	14	14	14	14
Connected load (kW)	0.8	1.1	1.1	1.1
Supply voltage (V/Hz)	230/50	230/50	230/50	230/50
Dimensions H x W x D (mm)	1380 x 560 x 660	1380 x 560 x 660	1380 x 560 x 660	1380 x 560 x 660
Weight (kg)	130	140	150	160

<b>Reverse Osmosis EDI</b>	<b>500</b>	<b>800</b>	<b>1100</b>
Pure water performance at 10 °C (L/h)	500	800	1100
Pure water quality (µS/cm)	0.1–1.0	0.1–1.0	0.1–1.0
Operating pressure (max. bar)	14	14	14
Connected load (kW)	2.3	2.3	3.5
Supply voltage (V/Hz)	400/50	400/50	400/50
Dimensions H x W x D (mm)	1800 x 1400 x 600	1800 x 1400 x 600	1800 x 1400 x 600
Weight (kg)	350	360	390



To learn more, contact your sales representative or email [sales.labwater@thermofisher.com](mailto:sales.labwater@thermofisher.com).

[thermoscientific.com/centralwater](http://thermoscientific.com/centralwater)

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